WHAT IS CLAIMED AS NEW AND IS DESIRED TO BE SECURED BY LETTERS PATENT OF THE UNITED STATES IS:

1. An optical scanning device, comprising:

a plurality of scanning optical systems configured to scan different scanning surfaces, each of the scanning optical systems comprising:

a light source configured to emit a light flux;

a deflector configured to scan the light flux emitted from the light source, wherein the deflector is commonly used in the plurality of scanning optical systems;

a scanning lens configured to condense the scanned light flux to the scanning surface;

an optical path inflection mirror configured to inflect the scanned light flux; and

an imaging lens configured to lead the light flux emitted from the light source to the deflector,

wherein the plurality of scanning optical systems are provided at both sides of the deflector with the deflector being therebetween such that one each of the scanning optical systems at both sides of the deflector comprise a set of the optical scanning system and respective light fluxes scanned by the deflector, the set of the optical scanning system being approximately parallel in a main scanning direction, and wherein an expression,

$$|N - M| = 2k + 1$$

is satisfied when a number of optical path inflection mirrors provided in each of the set of scanning optical systems is represented by "N" where N≥2, "M" where M≥1, and where "k" is an integer equal to zero or larger.

2. The optical scanning device according to claim 1, wherein one or more of the plurality of scanning optical systems are provided in a sub-scanning direction at both sides of the deflector in addition to the scanning optical systems provided at both sides of the deflector with the deflector being therebetween.

3. The optical scanning device according to claim 2, wherein a difference of the number of optical path inflection mirrors between two of the plurality of scanning optical systems in the sub-scanning direction at both sides of the deflector is set to zero or an even number.

4. An optical scanning device, comprising:

a plurality of scanning optical systems configured to scan different scanning surfaces, each of the scanning optical systems comprising:

a light source configured to emit a light flux;

a deflector configured to scan the light flux emitted

from the light source, wherein the deflector is commonly used in the plurality of scanning optical systems;

a scanning lens configured to condense the scanned light flux to the scanning surface;

an optical path inflection mirror configured to inflect the scanned light flux; and

an imaging lens configured to lead the light flux emitted from the light source to the deflector,

wherein the plurality of scanning optical systems are provided in a sub-scanning direction, and wherein a difference in a number of optical path inflection mirrors between two of the plurality of scanning optical systems is set to zero or an even number.

5. The optical scanning device according to claim 1, wherein the scanning optical system comprises a plurality of scanning lenses and an optical path inflection mirror being configured among the plurality of scanning lenses.

6. The optical scanning device according to claim 4, wherein the scanning lens is one of a plurality of scanning lenses and the optical path inflection mirror is provided among the plurality of scanning lenses.

7. The optical scanning device according to claim 1,

wherein the imaging lens comprises a resin lens.

8. The optical scanning device according to claim 4, wherein the imaging lens comprises a resin lens.

9. The optical scanning device according to claim 7, further comprising:

a housing to which the light source and the imaging lens are provided.

10. The optical scanning device according to claim 8, further comprising:

a housing configured to support the light source and the imaging lens.

11. The optical scanning device according to claim 9, wherein the imaging lens is directly affixed to the housing.

12. The optical scanning device according to claim 10, wherein the imaging lens is directly affixed to the housing.

13. An image forming apparatus, comprising:

a transfer sheet feeding device; and

an optical scanning device including a plurality of scanning optical systems configured to scan different scanning

surfaces, each of the scanning optical systems comprising:

a light source configured to emit a light flux;

a deflector configured to scan the light flux emitted from the light source, wherein the deflector is commonly used in the plurality of scanning optical systems;

a scanning lens configured to condense the scanned light flux to the scanning surface;

an optical path inflection mirror configured to inflect the scanned light flux; and

an imaging lens configured to lead the light flux emitted from the light source to the deflector,

wherein the plurality of scanning optical systems are provided at both sides of the deflector with the deflector therebetween such that one each of the scanning optical systems at both sides of the deflector comprise a set of the optical scanning system and respective light fluxes scanned by the deflector, the set of the optical scanning system being approximately parallel in a main scanning direction, and wherein an expression,

$$|N - M| = 2k + 1$$

is satisfied when a number of optical path inflection mirrors provided in each of the set of scanning optical systems is represented by "N" where $N \geq 2$, "M" where $M \geq 1$, and where "k" is an integer equal to zero or larger.

14. An image forming apparatus, comprising:

a transfer sheet feeding device; and

an optical scanning device including a plurality of scanning optical systems configured to scan different scanning surfaces, each of the scanning optical systems comprising:

a light source configured to emit a light flux;

a deflector configured to scan the light flux emitted from the light source, wherein the deflector is commonly used in the plurality of scanning optical systems;

a scanning lens configured to condense the scanned light flux to the scanning surface;

an optical path inflection mirror configured to inflect the scanned light flux; and

an imaging lens configured to lead the light flux emitted from the light source to the deflector,

wherein the plurality of scanning optical systems are provided in a sub-scanning direction, and wherein a difference of the number of optical path inflection mirrors between two of the plurality of scanning optical systems is set to zero or an even number.

15. An optical scanning device, comprising:

a plurality of scanning optical systems configured to scan different scanning surfaces, each of the scanning optical systems comprising:

a light source means for emitting a light flux;

a deflector means for scanning the light flux emitted from the light source means, wherein the deflector means is commonly used in the plurality of scanning optical systems;

a scanning lens means for condensing the scanned light flux to the scanning surface;

an optical path inflection mirror means for inflecting the scanned light flux; and

an imaging lens means for leading the light flux emitted from the light source means to the deflector means,

wherein the plurality of scanning optical systems are provided at both sides of the deflector means with the deflector means being therebetween such that one each of the scanning optical systems at both sides of the deflector means comprise a set of the optical scanning system and respective light fluxes scanned by the deflector means in the set of the optical scanning system become approximately parallel in a main scanning direction, and wherein an expression,

$$|N - M| = 2k + 1$$

is satisfied when a number of optical path inflection mirror means provided in each of the set of scanning optical systems is represented by "N" where $N \geq 2$, "M" where $M \geq 1$, and where "k" is an integer equal to zero or larger.

16. The optical scanning device according to claim 15,

wherein one or more of the plurality of scanning optical systems are provided in a sub-scanning direction at both sides of the deflector means in addition to the scanning optical systems provided at both sides of the deflector means with the deflector means being therebetween.

17. The optical scanning device according to claim 16, wherein a difference of the number of optical path inflection mirror means between two of the plurality of scanning optical systems in the sub-scanning direction at both sides of the deflector means is set to zero or an even number.

18. An optical scanning device, comprising:

a plurality of scanning optical systems configured to scan different scanning surfaces, each of the scanning optical systems comprising:

a light source means for emitting a light flux;

a deflector means for scanning the light flux emitted from the light source means, wherein the deflector means is commonly used in the plurality of scanning optical systems;

a scanning lens means for condensing the scanned light flux to the scanning surface;

an optical path inflection mirror means for inflecting the scanned light flux; and

an imaging lens means for leading the light flux

emitted from the light source means to the deflector means,

wherein the plurality of scanning optical systems are provided in a sub-scanning direction, and wherein a difference in a number of optical path inflection mirror means between two of the plurality of scanning optical systems is set to zero or an even number.

19. The optical scanning device according to claim 15, wherein the scanning lens means is one of a plurality of scanning lens means and an optical path inflection mirror means is provided among the plurality of scanning lens means.

20. The optical scanning device according to claim 18, wherein the scanning lens means is one of a plurality of scanning lens means and an optical path inflection mirror means is provided among the plurality of scanning lens means.

21. The optical scanning device according to claim 15, wherein the imaging lens means comprises a resin lens.

22. The optical scanning device according to claim 18, wherein the imaging lens means comprises a resin lens.

23. The optical scanning device according to claim 21, further comprising:

a housing means configured to support the light source means and the imaging lens means.

24. The optical scanning device according to claim 22, further comprising:

a housing means configured to support the light source means and the imaging lens means.

25. The optical scanning device according to claim 23, wherein the imaging lens means is directly affixed to the housing means.

26. The optical scanning device according to claim 24, wherein the imaging lens means is directly affixed to the housing means.

27. An image forming apparatus, comprising:

a transfer sheet feeding means for feeding a transfer sheet; and

an optical scanning means including a plurality of scanning optical systems for scanning different scanning surfaces, each of the scanning optical systems comprising:

a light source means for emitting a light flux;

a deflector means for scanning the light flux emitted from the light source means, wherein the deflector means is

commonly used in the plurality of scanning optical systems;

a scanning lens means for condensing the scanned light flux to the scanning surface;

an optical path inflection mirror means for inflecting the scanned light flux; and

an imaging lens means for leading the light flux emitted from the light source means to the deflector means,

wherein the plurality of scanning optical systems are provided at both sides of the deflector means with the deflector means being therebetween such that one each of the scanning optical systems at both sides of the deflector means comprise a set of the optical scanning system and respective light fluxes scanned by the deflector means, in the set of the optical scanning system being approximately parallel in a main scanning direction, and wherein an expression,

$$|N - M| = 2k + 1$$

is satisfied when a number of optical path inflection mirror means provided in each of the set of scanning optical systems is represented by "N" where $N \geq 2$, "M" where $M \geq 1$, and where "k" is an integer equal to zero or larger.

28. An image forming apparatus, comprising:

a transfer sheet feeding means for feeding a transfer sheet; and

an optical scanning means including a plurality of

scanning optical systems for scanning different scanning surfaces, each of the scanning optical systems comprising:

a light source means for emitting a light flux;

a deflector means for scanning the light flux emitted from the light source means, wherein the deflector means is commonly used in the plurality of scanning optical systems;

a scanning lens means for condensing the scanned light flux to the scanning surface;

an optical path inflection mirror means for inflecting the scanned light flux; and

an imaging lens means for leading the light flux emitted from the light source means to the deflector means,

wherein the plurality of scanning optical systems are provided in a sub-scanning direction, and wherein a difference in a number of optical path inflection mirror means between two of the plurality of scanning optical systems is set to zero or an even number.

29. A method for decreasing an amount of change in a relative scanning position, the method comprising:

providing a plurality of scanning optical systems configured to scan different scanning surfaces, each of the scanning optical systems comprising:

a light source to emit a light flux;

a deflector to scan the light flux emitted from the

light source, wherein the deflector is commonly used in the plurality of scanning optical systems;

a scanning lens to condense the scanned light flux to the scanning surface;

an optical path inflection mirror to inflect the scanned light flux; and

an imaging lens to lead the light flux emitted from the light source to the deflector,

wherein the plurality of scanning optical systems are provided at both sides of the deflector with the deflector being therebetween such that one each of the scanning optical systems at both sides of the deflector comprise a set of the optical scanning system and respective light fluxes scanned by the deflector, the set of the optical scanning system being approximately parallel in a main scanning direction, and wherein an expression,

$$|N - M| = 2k + 1$$

is satisfied when the number of optical path inflection mirrors provided in each of the set of scanning optical systems is represented by "N" where $N \geq 2$, "M" where $M \geq 1$, and where "k" is an integer equal to zero or larger.

30. A method for decreasing an amount of change in a relative scanning position, the method comprising:

providing a plurality of scanning optical systems to scan

different scanning surfaces, each of the scanning optical systems comprising:

a light source to emit a light flux;

a deflector to scan the light flux emitted from the light source, wherein the deflector is commonly used in the plurality of scanning optical systems;

a scanning lens to condense the scanned light flux to the scanning surface;

an optical path inflection mirror to inflect the scanned light flux; and

an imaging lens to lead the light flux emitted from the light source to the deflector,

wherein the plurality of scanning optical systems are provided in a sub-scanning direction, and wherein a difference in a number of optical path inflection mirrors between two of the plurality of scanning optical systems is set to zero or an even number.